U.S. Divisional Patent Application For: COMPLEMENTARY DNAs

Inventor(s): Jean-Baptiste Dumas Milne Edwards;

Aymeric Duclert, Lydie Bougueleret

Our Ref.: 36.US3.DIV

Express Mail Label No. EL821903714US

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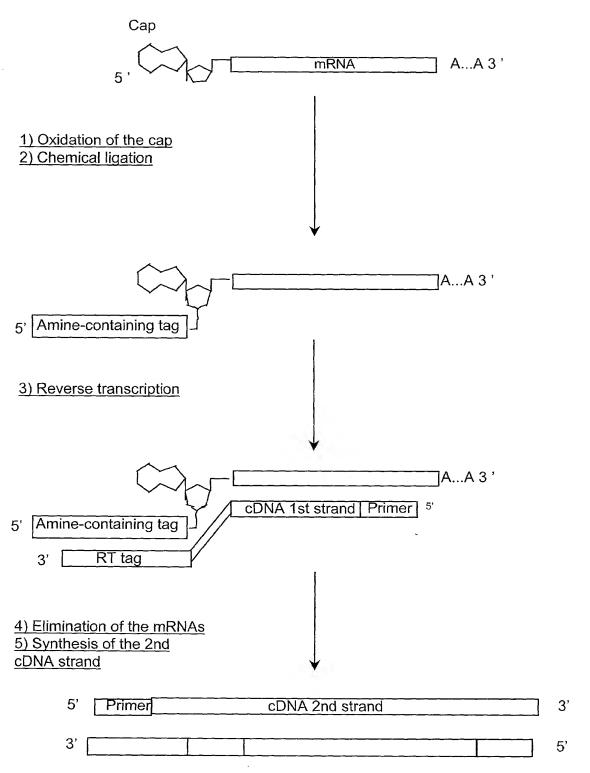


FIGURE 1

U.S. Divisional Patent Application

U.S. DIVISIONAL Patent Application
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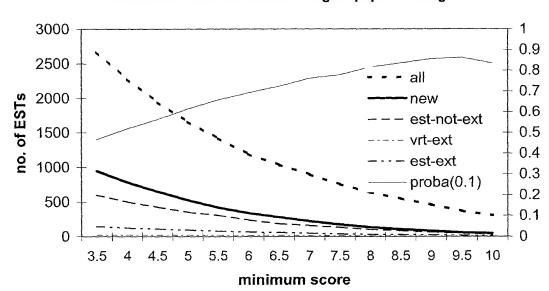
Minimum signal peptide score	false positive rate	false negative rate	proba(0.1)	proba(0.2)
3.5	0.121	0.036	0.467	0.664
4	0.096	0.06	0.519	0.708
4.5	0.078	0.079	0.565	0.745
5	0.062	0.098	0.615	0.782
5.5	0.05	0.127	0.659	0.813
6	0.04	0.163	0.694	0.836
6.5	0.033	0.202	0.725	0.855
7	0.025	0.248	0.763	0.878
7.5	0.021	0.304	0.78	0.889
8	0.015	0.368	0.816	0.909
8.5	0.012	0.418	0.836	0.92
9	0.009	0.512	0.856	0.93
9.5	0.007	0.581	0.863	0.934
10	0.006	0.679	0.835	0.919

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Influence of minimum score on signal peptide recognition



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O.S. Divisional Patent Application
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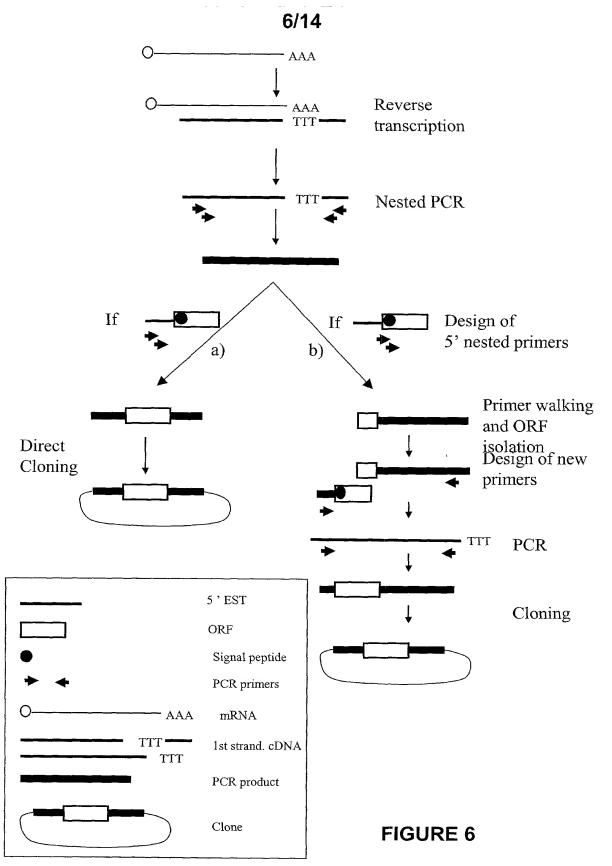
Minimum signal peptide score	All ESTs	New ESTs	ESTs matching public EST closer than 40 bp from beginning	ESTs extending known mRNA more than 40 bp	ESTs extending public EST more than 40 bp
3.5	2674	947	599	23	150
4	2278	784	499	23	126
4.5	1943	647	425	22	112
5	1657	523	353	21	96
5.5	1417	419	307	19	80
6	1190	340	238	18	68
6.5	1035	280	186	18	60
7	893	219	161	15	48
7.5	753	173	132	12	36
8	636	133	101	11	29
8.5	543	104	83	8	26
9	456	81	63	6	24
9.5	364	57	48	6	18
10	303	47	35	6	15

C.S. D.V.SIONA: A.ER. Application
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			FOT	FOT	
			ESTs	ESTs	ESTs
	All ESTs		matching	extending	extending
Tissue		New ESTs	public EST	known	public EST
1,222.5	2010		closer than	mRNA	more than
			40 bp from	more than	40 bp
			beginning	40 bp	•
Brain	329	131	75	3	24
Cancerous prostate	134	40	37	1	6
Cerebellum	17	9	1	0	6
Colon	21	11	4	0	0
Dystrophic muscle	41	18	8	0	1
Fetal brain	70	37	16	0	1
Fetal kidney	227	116	46	1	19
Fetal liver	13	7	2	0	0
Heart	30	15	7	0	1
Hypertrophic prostat	86	23 <sup>1</sup>	22	2	2
Kidney	10	7	3	0	0
Large intestine	21	8	4	0	1
Liver	23	9	6	0	0
Lung	24	12	4	0	1
Lung (cells)	57	38	6	o	4
Lymph ganglia	163	60	23	2	12
Lymphocytes	23	6	4	0	2
Muscle	33	16	6	0	4
Normal prostate	181	61	45	7	11
Ovary	90	57	12	1	2
Pancreas	48	11	6	ol	1
Placenta	24	5	1	0	0
Prostate	34	16	4	0	2
Spleen	56	28	10	o	1
Substantia nigra	108	47	27	1	6
Surrenals	15	3	3	1	o
Testis	131	68	25	1	8
Thyroid	17	8	2	o	2
Umbilical cord	55	17	12	1	3
Uterus	28	15	3	ol	2
Non tissue-specific	568	48	177	2	28
Total	2677	947	601	23	150

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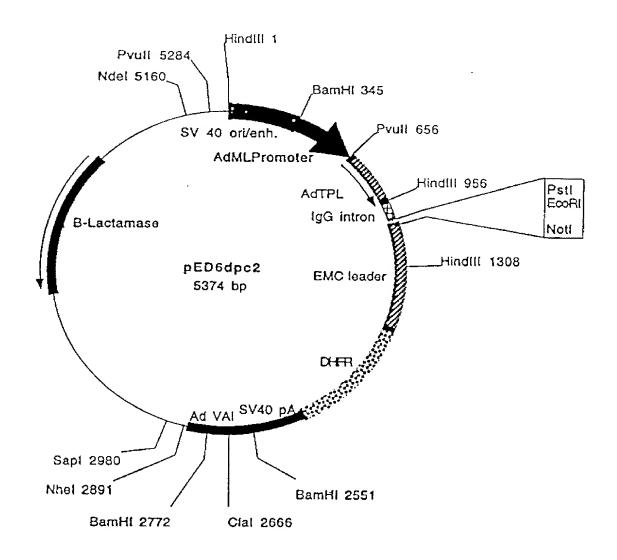
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Plasmid name: pED6dpc2

Plasmid size: 5347 bp

Comments/References: pED6dpc2 is derived from pED6dpc1 by insertion of a new polylinker to facilitate cDNA cloning. SST cDNAs are cloned between EcoRI and Not1. pED vectors are described in Kaufman et al. (1991), NAR 19:4485-4490.

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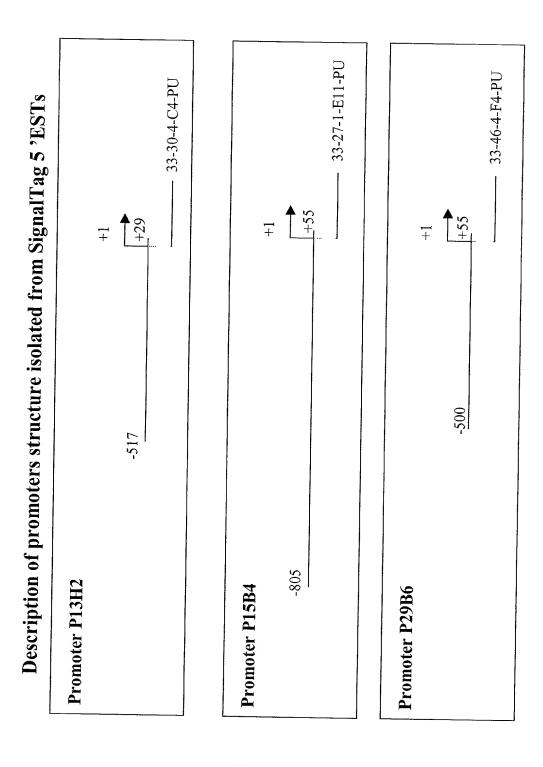


FIGURE 8

U.S. Divisional Patent Application For: COMPLEMENTARY DNAS

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#### Description of Transcription Factor Binding Sites present on promoters isolated from SignalTag sequences

Promoter sequence P13H2 (546 bp):								
Matrix	Position	Orientation	Score	Length	Sequence			
CMYB_01	-502	+	0.983	9	TGTCAGTTG			
MYOD_Q6	-501	-	0.961	10	CCCAACTGAC			
S8_01	-444	-	0.960	11	AATAGAATTAG			
S8_01	-425	+	0.966	11	AACTAAATTAG			
DELTAEF1_01	-390	-	0.960	11	GCACACCTCAG			
GATA_C	-364	-	0.964	11	AGATAAATCCA			
CMYB_01	-349	+	0.958	9	CTTCAGTTG			
GATA1_02	-343	+	0.959	14	TTGTAGATAGGACA			
GATA_C	-339	+	0.953	11	AGATAGGACAT			
TAL1ALPHAE47_01	-235	+	0.973	16	CATAACAGATGGTAAG			
TAL1BETAE47_01	-235	+	0.983	16	CATAACAGATGGTAAG			
TAL1BETAITF2_01	-235	+	0.978	16	CATAACAGATGGTAAG			
MYOD_Q6	-232	_	0.954	10	ACCATCTGTT			
GATA1_04	-217	-	0.953	13	TCAAGATAAAGTA			
IK1_01	-126	+	0.963	13	AGTTGGGAATTCC			
IK2_01	-126	+	0.985	12	AGTTGGGAATTC			
CREL_01	-123	+	0.962	10	TGGGAATTCC			
GATA1_02	-96	+	0.950	14	TCAGTGATATGGCA			
SRY_02	-41	-	0.951	12	TAAAACAAAACA			
E2F_02	-33	+	0.957	8	TTTAGCGC			
MZF1_01	-5	-	0.975	8	TGAGGGGA			

U.S. Divisional Patent Application For: COMPLEMENTARY DNAs

ror: COMPLEMENTARY UNAS Inventor(s): Jean-Baptiste Dumas Milne Edwards; Aymeric Duclert, Lydie Bougueleret Our Ref.: 36.US3.DIV Express Mail Label No. EL821903714US 10/14

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Matrix	Position	Orientation	Score	Length	Sequence
NFY Q6	-748	_	0.956	11	GGACCAATCAT
MZF1_01	-738	+	0.962	8	CCTGGGGA
CMYB_01	-684	+	0.994	9	TGACCGTTG
VMYB 02	-682	-	0.985	9	TCCAACGGT
STAT_01	-673	+	0.968	9	TTCCTGGAA
STAT_01	-673	_	0.951	9	TTCCAGGAA
MZF1_01	-556	_	0.956	8	TTGGGGGA
IK2_01	-451	+	0.965	12	GAATGGGATTTC
MZF1_01	-424	+	0.986	8	AGAGGGGA
SRY_02	-398		0.955	12	GAAAACAAAACA
MZF1_01	-216	+	0.960	8	GAAGGGGA
MYOD_Q6	-190	+	0.981	10	AGCATCTGCC
DELTAEF1_01	-176	+	0.958	11	TCCCACCTTCC
S8_01	5		0.992	11	GAGGCAATTAT
MZF1_01	16	_	0.986	8	AGAGGGGA

FIGURE 9 (cont)

For: COMPLEMENTARY DNAs
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Promoter sequence P29B6 (555 bp) :								
Matrix	Position	Orientation	Score	Length	Sequence			
ARNT_01	-311	+	0.964	16	GGACTCACGTGCTGCT			
NMYC_01	-309	+	0.965	12	ACTCACGTGCTG			
USF_01	-309	+	0.985	12	ACTCACGTGCTG			
USF_01	-309	_	0.985	12	CAGCACGTGAGT			
NMYC_01	-309	-	0.956	12	CAGCACGTGAGT			
MYCMAX 02	-309	_	0.972	12	CAGCACGTGAGT			
USF_C	-307	+	0.997	8	TCACGTGC			
USF_C	-307	_	0.991	8	GCACGTGA			
MZF1_01	-292	_	0.968	8	CATGGGGA			
ELK1_02	-105	+	0.963	14	CTCTCCGGAAGCCT			
CETS1P54_01	-102	+	0.974	10	TCCGGAAGCC			
AP1_Q4	-42	-	0.963	11	AGTGACTGAAC			
AP1FJ_Q2	-42	_	0.961	11	AGTGACTGAAC			
PADS_C	45	+	1.000	9	TGTGGTCTC			

FIGURE 9 (cont)

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97.8% identity in 92 aa overlap

			10	20	30	40	50	60
SEQ	ID	NO:120	MASLGHILVFCVG1	L <i>LTMAKA</i> ESPK	EH <b>DPFTYDYÇ</b>	SLQIGGLVIA	GILFILGILI	VLSRRC
			::::::::					
SEQ	ID	NO:180	MAPLHHILVFCVGI	L <i>tmaka</i> espk	EHDPFTYDYQ	SLQIGGLVIAC	GILFILGILI	VLSRRC
			10	20	30	40	50	60
			70	80	90			
SEQ	ID	NO:120	RCKFNQQQRTGEPI	DEEEGTFRSSI	RRLSTRRR			
			:::::::::::::::		:::::::			
SEQ	ID	NO:180	RCKFNQQQRTGEPI	DEEEGTFRSSI	RRLSTRRR			
			70	80	90			

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98.6% identity in 210 aa overlap

SEQ	ID	NO:121			MLT	10 LLGLSLILAG	20 LIVGGACIYE	30 CHFMPKST
SEQ	ID	NO:181	LLSRTVRTQILTG	KELRVATQEK 40	::: EGSSGRCMLT 50	::::::::::::::::::::::::::::::::::::::	LIVGGACIYE	:::::: CYFMPKST 80
			30	10	30		, 0	00
			40	50	60	70	80	90
SEQ	ID	NO:121	IYRGEMCFFDSED	PANSLRGGEP:	NFLPVTEEAD	IREDDNIAII	DVPVPSFSDS	SDPAAIIH
			:::::::::::::::::::::::::::::::::::::::	::::::::	:::::::::	::::::::::	:::::::::	::::::
SEQ	ID	NO:181	IYRGEMCFFDSED	PANSLRGGEP:	NFLPVTEEAD	IREDDNIAII	DVPVPSFSDS	BDPAAIIH
			90	100	110	120	130	140
			100	110	120	130	140	150
SEQ	ID	NO:121	DFEKGMTAYLDLL	LGNCYLMPLN	rsivmppenl	VELFGKLASG	RYLPQTYVVF	REDLVAVE
			:::::::::::::::::::::::::::::::::::::::	:::::::::	::::::::::	::::::::::	::::::::	:::::::
SEQ	ID	NO:181	DFEKGMTAYLDLL	LGNCYLMPLN	TSIVMPPKNL	VELFGKLASG	RYLPQTYVVF	REDLVAVE
			150	160	170	180	190	200
			160	170	180	190	200	210
SEQ	ID	NO:121	EIRDVSNLGIFIY	QLCNNRKSFR	LRRRDLLLGF	NKRAIDKCWK	IRHFPNEFI	/ETKICQE
~=-				:::::::::::::::::::::::::::::::::::::::	: : : : : : : : : :	::::::::::		
SEQ	ID	NO:181	EIRDVSNLGIFIY	~				~
			210	220	230	240	250	260

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83.4% identity in 211 aa overlap SEQ ID NO:128 LWWFWLLWTVLILFSCCCAFRHRRAKLRLQ SEQ ID NO:182 ELCPGVNTQPYLCETGHCCGETGCCTYYYELWWFWLLWTVLILFSCCCAFRHRRAKLRLQ SEQ ID NO:128 QQQRQREINLLAYHGACHGAGPFPTGSLLDLRLLSTFKPPAYEDVVHRPGT**PPPPY**TVAP SEQ ID NO:182 QQQRQREINLLAYHGACHGAGPVPTGSLLDLRLLSAFKPPAYEDVVHHPGT**PPPPY**TVGP SEQ ID NO:128 GRPLTASSEQTCCSSSSSCPAHFEGTNVEGVSSHQSAPPHQEGEPGAGVTPASTPPSCRY SEQ ID NO:182 GYPWTTSSECTRCSSESSCSAHLEGTNVEGVSSQQSALPHQEGEPRAGLSPVHIPPSCRY SEQ ID NO:128 RRLTGDSGIELCPCPASGEGEPVKEVRVSATLPDLEDYSPCALPPESVPQIFPMGLSSSE SEQ ID NO:182 RRLTGDSGIELCPCPDSSEGEPLKEARASASQPDLEDHSPCALPPDSVSQVPPMGLASSC SEQ ID NO:128 GDIP SEQ ID NO:182 GTSHK